**Intro Stat- Warm Up NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Suppose that 75% of AP Statistics students studied for the Ch. 7 test. Of those that study 60% get an A and of those that didn’t study only 10% get an A.
   1. Create a tree diagram.
   2. What is the probability that a student got an A?
   3. If we know that a student got an A, what is the probability that they didn’t study?
   4. What is the probability that a student did not get an A?
   5. If we know a student did not get an A? what is the probability that they studied for the test?

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5. If we know a student did not get an A? what is the probability that they studied for the test?
6. Suppose that in a math class, 65% of the students do their HW on a nightly basis. Assume students doing their HW are independent of each other.
   1. Use a tree diagram to create the probability model for X, the number of students who do their HW out of a sample of 3 students.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X | 0 | 1 | 2 | 3 |
| P(X) |  |  |  |  |

* 1. What is the probability that there will be exactly 1 student that did their HW last night?
  2. What is the probability that at least 2 students did their HW last night?
  3. What is the probability that less than 2 students did their HW last night?
  4. What is the probability that no one did their HW last night?
  5. What is the probability that everyone did their HW last night?
  6. What is the expected number of students who do their HW in a sample of 3?

2. Suppose that in a math class, 65% of the students do their HW on a nightly basis. Assume students doing their HW are independent of each other.

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